

DETAILED ACTION

1. Claims 1-28 are pending.

Claim Objections

2. Claim 28 is objected to because of the following informalities: Claim 28, line 1 contains a grammatical error. Appropriate correction is required.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. **Claims 27 and 28 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.**

5. With respect to claim 27, “electronic signals” is being recited. Electronic signals are not one of the categories of statutory subject matter. See MPEP 2106.01

6. With respect to claim 28, “computer program” is being recited. A computer program is software. Software is not one of the categories of statutory subject matter. See MPEP 2106.01

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. **Claims 1-11 and 15-26 are rejected under 35 U.S.C. 102(b) as being anticipated by Wilson (Pub. No. US 2001/0054101 A1), hereinafter Wilson. Wilson is cited in the Information Disclosure Statement filed by applicant on 2/2/2005.**

9. With respect to claim 1, Wilson discloses a registration driver ([0007], lines 4-7) provided at a selected location of the internal network for registering a client connecting to one of the network entities ([0007], lines 4-7); an address assignment handler ([0027], lines 10-12) provided at the selected location of the internal network for assigning to the client an address ([0027], lines 10-12) associated with the one of the network entities to which the client is connected ([0027], lines 10-12 and 1-4); and an information handler ([0007], lines 8-10, when a packet filter permits transmission of packets based on registration status, an information handler is inherent) for handling information relating to network services for the client based on the assigned address ([0007], lines 8-13) .

10. With respect to claim 2, Wilson discloses the registration driver registers the client ([0007], lines 4-7) with the assigned Internet Protocol (IP) address or Media Access Control (MAC) address ([0007], lines 11-13).

11. With respect to claim 3, Wilson discloses the registration driver registers the client ([0007], lines 4-7) in association with information of one or more network elements through which the client is routed ([0027], lines 10-12 and 1-4).

12. With respect to claim 4, Wilson discloses a network entity database ([0068], lines 1-5, when registration data is stored, a database is inherent) for storing location information of a network entity in association with a MAC address of the network entity ([0070], lines 1-6); and a location resolution handler ([0058], lines 1-10) for obtaining a network entity MAC address from network traffic sent from or to a client connected to the network entity ([0058], lines 1-10), and resolving the location of the client based on the location information of the network entity using the client IP address or MAC address ([0058], lines 10-19; [0060], lines 1-12).

13. With respect to claim 5, Wilson discloses the registration driver registers the client ([0007], lines 4-7) in association with a client IP address or client MAC address ([0007], lines 11-13).

14. With respect to claim 6, Wilson discloses the internal network reflects one or more network entities which are routing devices ([0027], lines 1-4); and the address assignment handler ([0027], lines 10-12, when the server translates the setting of the client machine into addresses, an address assignment handler is inherent) assigns to the client an address that reflects information of one or more routing devices that the client traffic is routed ([0027], lines 1-4).

15. With respect to claim 7, Wilson discloses the internal network includes one or more relay modules ([0027], lines 1-4 and 10-12; [0134], lines 1-2); and the address assignment handler ([0027], lines 10-12) assigns to the client an address ([0027], lines 10-12) that reflects information of one or more relay modules through which the client traffic passes ([0027], lines 1-4 and 10-12; [0134], lines 1-2).

16. With respect to claim 8, Wilson discloses the internal network includes network entities which are bridging devices ([0155], lines 10-13); and the address assignment handler ([0027], lines 10-12) assigns to the client an address ([0027], lines 10-12) that reflects information of bridged network entities through which the client traffic passes ([0155], lines 10-13 and 9-10).

17. With respect to claim 9, Wilson discloses the information handler ([0176], lines 1-3) handles billing information for a client ([0177], lines 1-9) based on the location of the

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client as resolved by the location resolution handler ([0058], lines 10-19; [0060], lines 1-12).

18. With respect to claim 10, Wilson discloses the client has a fixed address that is used for a foreign network ([0052], lines 1-2); and an address translator for translating the fixed address to or from the assigned address ([0052], lines 14-17).

19. With respect to claim 11, Wilson discloses a network entity provisioning handler (abstract, lines 1-4) for provisioning a network entity (abstract, lines 1-4; [0029], lines 4-5; [0038], lines 1-2); and a network entity information handler (abstract, lines 1-4) for storing the provisioning information in the network entity database (abstract, lines 18-21).

20. With respect to claim 15, Wilson discloses a method of registering, at a selected location of the internal network, a client connecting to one of the network entities ([0007], lines 4-5); assigning to the client an address associated with the one of the network entities to which the client is connected([0027], lines 10-12 and 1-4); and handling information relating to network services for the client based on the assigned address ([0007], lines 8-13).

21. With respect to claim 16, Wilson discloses the registering step registers the client based on the assigned Internet Protocol (IP) address or Media Access Control (MAC) address ([0007], lines 11-13).

22. With respect to claim 17, Wilson discloses the registering step registers the client in association with information of one or more network elements through which the client is routed ([0027], lines 10-12 and 1-4).

23. With respect to claim 18, Wilson discloses storing location information of a network entity in association with a assigned IP address of the network entity ([0070], lines 1-6; obtaining a network entity MAC address from network traffic sent from or to a client connected to the network entity ([0058], lines 1-10); and resolving the location of the client based on the location information of the network entity using the client IP address or MAC address ([0058], lines 10-19; [0060], lines 1-12).

24. With respect to claim 19, Wilson discloses the registering step registers the client ([0007], lines 4-7). in association with a client IP address or client MAC address ([0007], lines 11-13).

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25. With respect to claim 20, Wilson discloses the assigning step assigns to the client an address ([0027], lines 10-12) that reflects information of the device through which the client is routed when one or more network entities are routing devices ([0027], lines 1-4).

26. With respect to claim 21, Wilson discloses the assigning step assigns to the client an address ([0027], lines 10-12) that reflects information of one or more relay modules through which the client traffic passes when the internal network includes one or more relay modules ([0027], lines 10-12 and 1-4; [0134], lines 1-2).

27. With respect to claim 22, Wilson discloses the assigning step assigns to the client an address ([0027], lines 10-12) that reflects information of bridged network entities through which the client traffic passes when one or more network entities are bridging devices ([0155], lines 10-13 and 9-10).

28. With respect to claim 23, Wilson discloses the information handling step handles billing information for a client ([0177], lines 1-9) based on the location of the client as resolved by the location resolution handler ([0058], lines 10-19; [0060], lines 1-12).

29. With respect to claim 24, Wilson discloses for a client having a fixed address that is used for a foreign network (0052], lines 1-2), translating the fixed address to or from the assigned address ([0052], lines 14-17).

30. With respect to claim 25. Wilson discloses provisioning a network entity (abstract, lines 1-4; [0029], lines 4-5; [0038], lines 1-2); and storing the provisioning information in a network entity database (abstract, lines 18-21).

26. With respect to claim 26, Wilson discloses a computer readable medium storing the instructions or statements for use in the execution in a computer of a method of managing network services for an internal network operated by a multi-system operator, the internal network being formed with network entities, the method comprising the steps of: registering, at a selected location of the internal network, a client connecting to one of the network entities ([0007], lines 4-5); assigning to the client an address ([0052], lines 4-7) associated with the one of the network entities to which the client is connected ([0027], lines 10-12 and 1-4); and handling information relating to network services for the client based on the assigned address ([0007], lines 8-13).

Claim Rejections - 35 USC § 103

31. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

32. Claims 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wilson, in view of Ferreria et al. (Patent No. US 6,857,009 B1), hereinafter Ferreria.

33. With respect to claim 12, Wilson discloses a registration driver ([0007], lines 4-7) provided at a selected location of the cable modem network for registering a client connecting to one of the cable modems([0007], lines 4-7); an address assignment handler ([0027], lines 10-12) provided at the selected location of the cable modem network for assigning to the client a client address associated with the one of the cable modems to which the client is connected ([0027], lines 10-12 and 1-4); and an information handler ([007], lines 8-10) for handling information relating to Internet services for the client based on the assigned client address ([0007], lines 8-13).

Wilson does not disclose a cable modem network having multiple cable modems and Cable Modem Termination Systems (CMTSs) for communicating with connected cable modems.

Ferreria, however, discloses a cable modem network having multiple cable modems and Cable Modem Termination Systems (CMTSs) for communicating with connected cable modems (column 6, lines 40-47).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Wilson by incorporating a registration driver, address assignment handler, and address assignment handler with a cable modem network as taught by Ferreria, in order to provide high speed services and for traffic that is coming from the Internet to be routed (or bridged) through the Ethernet interface, through the CMTS and then onto the RF interfaces that are connected to the provider.

34. With respect to claim 13, Wilson discloses the registration driver registers the client based on the assigned IP address or MAC address ([0007], lines 11-13).

35. With respect to claim 14, Wilson discloses the registration driver registers the client in association with information of a CMTS to which the client is connected ([0007], lines 4-7).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TREVILLIAN H. HIGHTER whose telephone number is (571)270-3806. The examiner can normally be reached on Monday-Thursday 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nabil El-Hady can be reached on (571) 272-3963. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TH 12/11/07

/Nabil El-Hady/
Supervisory Patent Examiner, Art Unit 4152